



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety Administration**

July 27, 2009

East Building, PHH – 30
1200 New Jersey Avenue, Southeast
Washington, D.C. 20590

DOT-SP 14496
(THIRD REVISION)

EXPIRATION DATE: March 31, 2013
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(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Schlumberger Oilfield UK PLC
(Former Grantee: Oilphase Division, Schlumberger
Evaluation & Production (UK) Ltd)
Dyce Aberdeen, Scotland United Kingdom
(U.S. Agent: Schlumberger Reservior
Completions, Houston, TX)
2. PURPOSE AND LIMITATIONS:
 - a. This special permit authorizes the manufacture, marking, sale and use of a non-DOT specification cylinder, used for oil well sampling, conforming with all regulations applicable to a DOT Specification 3A cylinder, except as specified herein, for the transportation in commerce of the materials authorized by this special permit. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
 - b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce. The safety analyses did not consider the hazards and risks associated with consumer use, use as a component of a transport vehicle or other device, or other uses not associated with transportation in commerce.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.201(c), 173.202(c), 173.203(c), 173.301(f), 173.302a(a), 173.304a(a), 173.304(d), and 175.3 in that a non-DOT

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specification cylinder is not authorized, except as specified herein.

5. BASIS: This special permit is based on the application of Schlumberger Oilfield UK PLC Ltd dated May 6, 2009, submitted in accordance with § 107.105 and additional information dated July 10, 2009.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Material Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Compressed gas, toxic, flammable, n.o.s. Inhalation Hazard Zone B	2.3	UN1953	N/A
Hydrocarbon gas mixture, compressed, n.o.s.	2.1	UN1964	N/A
Hydrocarbon gas mixture, liquefied, n.o.s.	2.1	UN1965	N/A
Hydrogen sulfide	2.3	UN1053	N/A
Liquefied gas, flammable, n.o.s.	2.1	UN3161	N/A
Petroleum gases, liquefied or Liquefied petroleum gas	2.1	UN1075	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a non-DOT specification oil well sampling cylinder threaded at two ends, with a design pressure (maximum service pressure) of 10,000 psig. Each cylinder must comply with the design calculations, drawings, materials specifications, and engineering specifications submitted with Oilphase's application for special permit on file with the Office of Hazardous Materials Special Permits and Approvals (OHMSPA). In addition, each cylinder must conform with DOT 3A specification (49 CFR §§ 178.35 and 178.36) except as follows:

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§ 178.35(e) Safety devices. No pressure relief device is required on the completed cylinder. Each cylinder must be equipped with elastomeric seals that relieve pressure when subjected to a pool fire.

§ 178.35(f) Markings.

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((f)(1)(i) Each cylinder must be marked "DOT-SP 14496" in lieu of "DOT 3A", followed immediately by the service pressure.

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§ 178.36(b) Materials. The authorized materials of construction are Inconel 718, 17-4PH stainless steel, and Monel K-500 in accordance with Schlumberger-Oilphase Material Specifications 100007444, 100021899, and 100021901 respectively. The materials wetted with reservoir fluids must meet the requirements of the National Association of Corrosion Engineers (NACE) specification MR-01-75 for suitability in hydrogen sulfide (H₂S) service.

§ 178.36(d) Manufacturing. Cylinders must be manufactured using equipment and processes adequate to ensure that each cylinder produced conforms to the requirements of this special permit. Material stock must be inspected to assure cleanliness and be free of defects that are likely to weaken the finished cylinder. The final dimensions of the finished cylinder must conform to Schlumberger-Oilphase Drawing No. 100167492 Revision AD, dated August 31, 2007; 100198919 (Split Nut 1.5625x12SA, CPS); 100167472 (Sample Chamber, CPS); 100209054 (Lower Head, CPS Sampler Chamber); 100167473 (Fixed Piston, CPS) and 100167566 (Prime Nipple, CPS) on file with OHMSPA.

§ 178.36(f) Wall thickness. Minimum wall thickness is 0.1555 inch. In no instance may the wall stress at the minimum specified test pressure exceed 67% of the minimum tensile strength of the material as determined from the physical tests required in § 178.36(k).

§ 178.36(g) Heat treatment. The completed cylinder need not be heat treated. Heat treatment of the purchased stock material must conform to the

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Schlumberger-Oilphase Material Specifications
100007444, 100021899, and 100021901 as applicable, on
file with OHMSPA.

§ 178.36(h) Openings in cylinders and connections for those openings. Openings and connections must conform to Schlumberger-Oilphase Drawing No. 100167492 Revision AD, dated August 31, 2007 and drawings attached thereto on file with the OHMSPA.

§ 178.36(l) Acceptable results for physical and flattening tests. A flattening test in accordance with § 178.36(j) is not required if the yield strength is not over 73% of the tensile strength. If a flattening test is required, the cylinder must be flattened, without cracking, to 6 times the wall thickness.

(1) For Inconel 718 bar stock:

Minimum Tensile strength:	175,000 psi
Minimum Yield strength:	125,000 psi
Minimum Elongation:	20% on 2in gauge specimen

(2) For 17-4 PH bar stock:

Minimum Tensile strength:	135,000 psi
Minimum Yield strength:	105,000 psi
Minimum Elongation:	20% on 2in gauge specimen

(3) For Monel K-500 bar stock:

Minimum Tensile strength:	135,000 psi
Minimum Yield strength:	100,000 psi
Minimum Elongation:	20% on 2in gauge specimen

b. TESTING - Each cylinder must be reinspected and hydrostatically retested in accordance with §§ 180.205 and 180.209 as prescribed for DOT 3A specification cylinders. Reheat treatment or repair of rejected cylinders is not permitted.

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c. OPERATIONAL CONTROLS -

(1) Each cylinder must be packed in the transportation box as specified in the Schlumberger-Oilphase application for special permit on file with OHMSPA.

(2) Emergency response information provided with the shipment and available via an emergency response telephone number must indicate that the cylinders are not equipped with pressure relief devices and provide appropriate guidance in case the cylinders are exposed to fire.

8. SPECIAL PROVISIONS:

a. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this special permit for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this special permit.

b. A person who is not a holder of this special permit, but receives a packaging covered by this special permit, may reoffer it for transportation provided no modification or change is made to the packaging and it is offered for transportation in conformance with this special permit and the HMR.

c. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

d. Each packaging manufactured under the authority of this special permit must be either (1) marked with the name of the manufacturer and location (city and state) of the facility at which it is manufactured or (2) marked with a registration symbol designated by the Office of Hazardous Materials Special Permits and Approvals for a specific manufacturing facility.

e. A current copy of this special permit must be maintained at each facility where the package is manufactured under this special permit. It must be made available to a DOT representative upon request.

f. The cylinders are authorized for oil well sampling service only.

- g. Transportation of Division 2.1 (flammable gases) and Division 2.3 materials (toxic gases) are not authorized aboard cargo vessel or aircraft unless specifically authorized in the Hazardous Materials Table (§ 172.101).
9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel, and cargo aircraft only.
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel, aircraft or motor vehicle used to transport packages covered by this special permit. The shipper must furnish a current copy of this special permit to the air carrier before or at the time the shipment is tendered.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
- o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
 - o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
 - o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when this special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) - 'The Hazardous Materials Safety and Security Reauthorization Act of 2005' (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous

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materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for Theodore L. Willke
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: CWFREEMAN/sln